

RB

PCT 09

500W

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/890,836

DATE: 10/29/2001
TIME: 14:15:10

Input Set : A:\20377YP SEQ LIST.TXT
Output Set: N:\CRF3\10292001\I890836.raw

4 <110> APPLICANT: Andrew Bett
5 Volker Sandig
6 Rima Youil
8 <120> TITLE OF INVENTION: IMPROVED HELPER DEPENDENT VECTOR SYSTEM
9 FOR GENE THERAPY
11 <130> FILE REFERENCE: 20377YP
13 <140> CURRENT APPLICATION NUMBER: 09/890,836
C--> 14 <141> CURRENT FILING DATE: 2001-09-28
16 <150> PRIOR APPLICATION NUMBER: PCT/US00/02405
17 <151> PRIOR FILING DATE: 2000-01-31
19 <150> PRIOR APPLICATION NUMBER: 60/138,134
20 <151> PRIOR FILING DATE: 1999-06-08
22 <150> PRIOR APPLICATION NUMBER: 60/118,601
23 <151> PRIOR FILING DATE: 1999-02-04
25 <160> NUMBER OF SEQ ID NOS: 17
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0
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30 <211> LENGTH: 15
31 <212> TYPE: DNA
32 <213> ORGANISM: Artificial Sequence
34 <220> FEATURE:
35 <223> OTHER INFORMATION: Consensus sequence
37 <221> NAME/KEY: misc_feature
38 <222> LOCATION: (1)...(15)
39 <223> OTHER INFORMATION: n = A,T,C or G
41 <400> SEQUENCE: 1
W-42 atttgnnnnnnnnngc 15
44 <210> SEQ ID NO: 2
45 <211> LENGTH: 10
46 <212> TYPE: DNA
47 <213> ORGANISM: Artificial Sequence
49 <220> FEATURE:
50 <223> OTHER INFORMATION: Adenovirus 5
52 <400> SEQUENCE: 2
53 attttgtgtt 10
55 <210> SEQ ID NO: 3
56 <211> LENGTH: 10
57 <212> TYPE: DNA
58 <213> ORGANISM: Artificial Sequence
60 <220> FEATURE:
61 <223> OTHER INFORMATION: Consensus sequence
63 <400> SEQUENCE: 3
64 attttgttgt 10
66 <210> SEQ ID NO: 4
67 <211> LENGTH: 158
68 <212> TYPE: DNA
69 <213> ORGANISM: Artificial Sequence

ENTERED

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71 <220> FEATURE:
 72 <223> OTHER INFORMATION: Synthetic packaging signal
 74 <400> SEQUENCE: 4
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 76 gggccgagta agatggacc gtttacgcgg ggacttgaa taagagcgag tgaaatctga 120
 77 ataattttgt tttactcata gcgcgttaatc tctagacg 158
 79 <210> SEQ ID NO: 5
 80 <211> LENGTH: 158
 81 <212> TYPE: DNA
 82 <213> ORGANISM: Artificial Sequence
 84 <220> FEATURE:
 85 <223> OTHER INFORMATION: Adenovirus 5
 87 <400> SEQUENCE: 5
 88 gtacacagga agtgacaatt ttcgcgcggg tttaggcgga tggtagta aatttggcg 60
 89 taaccgagta agatggcc attttcgcc gaaaactgaa taagaggaag tgaaatctga 120
 90 ataattttgt tttactcata gcgcgttaatc tctagacg 158
 92 <210> SEQ ID NO: 6
 93 <211> LENGTH: 65
 94 <212> TYPE: DNA
 95 <213> ORGANISM: Artificial Sequence
 97 <220> FEATURE:
 98 <223> OTHER INFORMATION: Linker
 100 <400> SEQUENCE: 6
 101 agtcggccg attattggcg cggcagatct gcggccgctt ctagaaacgc gtgaattcgg 60
 102 cggca 65
 104 <210> SEQ ID NO: 7
 105 <211> LENGTH: 65
 106 <212> TYPE: DNA
 107 <213> ORGANISM: Artificial Sequence
 109 <220> FEATURE:
 110 <223> OTHER INFORMATION: Linker
 112 <400> SEQUENCE: 7
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 114 ggccg 65
 116 <210> SEQ ID NO: 8
 117 <211> LENGTH: 40
 118 <212> TYPE: DNA
 119 <213> ORGANISM: Artificial Sequence
 121 <220> FEATURE:
 122 <223> OTHER INFORMATION: PCR Primer
 124 <400> SEQUENCE: 8
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 127 <210> SEQ ID NO: 9
 128 <211> LENGTH: 41
 129 <212> TYPE: DNA
 130 <213> ORGANISM: Artificial Sequence
 132 <220> FEATURE:
 133 <223> OTHER INFORMATION: PCR Primer
 135 <400> SEQUENCE: 9

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136 gatcgtcggc cgcttgggtc atagacttct ttgagaacca g	41
138 <210> SEQ ID NO: 10	
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141 <213> ORGANISM: Artificial Sequence	
143 <220> FEATURE:	
144 <223> OTHER INFORMATION: PCR Primer	
146 <400> SEQUENCE: 10	
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149 <210> SEQ ID NO: 11	
150 <211> LENGTH: 37	
151 <212> TYPE: DNA	
152 <213> ORGANISM: Artificial Sequence	
154 <220> FEATURE:	
155 <223> OTHER INFORMATION: PCR Primer	
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160 <210> SEQ ID NO: 12	
161 <211> LENGTH: 39	
162 <212> TYPE: DNA	
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165 <220> FEATURE:	
166 <223> OTHER INFORMATION: PCR Primer	
168 <400> SEQUENCE: 12	
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171 <210> SEQ ID NO: 13	
172 <211> LENGTH: 45	
173 <212> TYPE: DNA	
174 <213> ORGANISM: Artificial Sequence	
176 <220> FEATURE:	
177 <223> OTHER INFORMATION: PCR Primer	
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182 <210> SEQ ID NO: 14	
183 <211> LENGTH: 41	
184 <212> TYPE: DNA	
185 <213> ORGANISM: Artificial Sequence	
187 <220> FEATURE:	
188 <223> OTHER INFORMATION: PCR Primer	
190 <400> SEQUENCE: 14	
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193 <210> SEQ ID NO: 15	
194 <211> LENGTH: 46	
195 <212> TYPE: DNA	
196 <213> ORGANISM: Artificial Sequence	
198 <220> FEATURE:	
199 <223> OTHER INFORMATION: PCR Primer	
201 <400> SEQUENCE: 15	
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Input Set : A:\20377YP SEQ LIST.TXT
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204 <210> SEQ ID NO: 16
 205 <211> LENGTH: 28068
 206 <212> TYPE: DNA
 207 <213> ORGANISM: Artificial Sequence
 209 <220> FEATURE:
 210 <223> OTHER INFORMATION: Modified adenovirus
 212 <400> SEQUENCE: 16

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214	agtttgcac	gtggcgcggg	gcgtggaaac	ggggcgggtg	acgttagtagt	gtggcggaaag	120
215	tgtatgttt	caagtgtggc	ggaacacatg	taagcgacgg	atgtggcaaa	agtgcgttt	180
216	ttgggtgtgcg	ccgggtgtaca	caggaagtga	caattttcgc	gcgggttttag	gcggatgttg	240
217	tagtaaattt	ggcgtaacc	gagtaagatt	tggccatttt	cgcgggaaaaa	ctgaataaga	300
218	ggaagtgaaa	tctgaataat	tttgtgttac	tcatagcgcg	taatatttgc	ctaggggccgc	360
219	ggggactttt	accgtttacg	tggagactcg	cccagggttt	tttctcagg	gttttccgcg	420
220	ttccgggtca	aagttggcgt	tttgatttcgg	ccgcgtgggt	catagacttc	tttgagaacc	480
221	agttataagc	tatggtttct	ctccacagaa	aaagcactta	tggtgtctcc	ccctttccag	540
222	cccaccaaca	ttttacatct	aatttggggg	ggttttctgg	accacttaat	accatccat	600
223	ggatctcatg	tgaagactcc	cctggcttga	gaaatcactg	tcttggtaa	aatggaaaca	660
224	aagctaagtc	agatacgctgg	ttcatcagca	atgactttga	ccaagcctga	tcccccaccta	720
225	ccccacccca	ccccagtgac	caccccccac	aatggagcac	acaactctaa	actgggtttgt	780
226	aggtatgtgt	gtgtgaacac	gctgaggaat	ctgcaaaacc	aaatggtgag	tgcaaaaacca	840
227	aacagtcacg	agtaaatctc	acaacaacca	cgtcctgagc	tgcagccctt	gttgaactat	900
228	accccaactag	ggccccaaaga	ttttaggact	tgtgtgtggg	tgggacccctcc	cctttctatc	960
229	atgcctttaga	agacagggt	ttcaccagaa	ttgaacatat	tgaacatatg	accatttttt	1020
230	ttcagccaaa	ggcaattaaa	ataacttcat	acttgatatac	catgtcagca	aaagctgcaa	1080
231	aacgc当地at	ggtggtctgct	aagagccctg	gtaccctgac	gagcacacca	agtgcttagc	1140
232	aacagtgggt	tccaaaggac	cagctggaaag	cctgccttga	tgagaagttt	cttttttttc	1200
233	tacatgaagg	aacacctcta	ctctcctgct	ttaataacct	gagctgtgag	tgatcatcta	1260
234	tgtccattag	caaacatccc	agtggagaag	gaaacactca	tacccgaaat	ctaagctaca	1320
235	tagttggaaat	cacttcaact	tatttcaata	aacacttact	aagcacctat	tgtggcaag	1380
236	tctttcaat	ggataatagt	tcaatgtata	ttttgtatgt	atatttggaa	taacaataaaa	1440
237	aatttgcacc	actgaattta	tttgcattt	gctgtgttt	aggcactaac	ccagggttctt	1500
238	taaatattt	gtcttatttcg	atctgtataa	atagccatct	atgagaaagg	gactattatt	1560
239	gcccttattt	tacaaatgag	gccaatgagg	cccagagagg	ttaactaagt	tgccaaaaat	1620
240	catacagccc	actagtggca	gagcaggatg	caaaccagg	ttgcctcg	tcccaagccc	1680
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243	tttccaaagg	gagggtgtgg	cctccggaca	aatttttaag	aactaattat	aaataacttaa	1860
244	aaatggaaat	aagaagacaa	cctaactacc	tgaacagttt	tagagatgac	tcatgcccac	1920
245	cctctaaac	ccaaacaaaa	acaacaaatg	caagaaaacc	catgaaatct	tagcaagcga	1980
246	tttctatgt	tttgcataat	ggatttctt	accattctaa	tgggatttat	gccaaccata	2040
247	gagggtctag	tgcccctccc	atgggggtgt	tagttagtac	agagctgagc	tcacccggcca	2100
248	tctgcagctt	catgttatca	agctccagtt	tgtccttgg	gcaagggtat	ctgggacatg	2160
249	agcagaggca	ttgcatttctg	caatggacag	ttcttctgc	ctgcataacct	agtccttga	2220
250	taactttaaa	taccatttt	tagccacact	ggagtttga	agacctaat	atgcaaatat	2280
251	tactcaggtt	ctgattactt	gtctgctcca	tgataacaca	ctctaaaagc	aatgaatggg	2340
252	gcttattttgt	agagaactga	agcattttaa	gctttgtct	aggaatccct	ggttagctcc	2400
253	tgtacttgc	aagatattag	tgatgggtca	agaaacagga	ccccccatca	gcataacata	2460
254	cgcagtgcc	cagtagtcca	tcaggcagaa	aaaactgcag	atggcacatg	gaaatgacca	2520

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255	gcggcggaag ataccccgac agtgtggca gttctattc agcagcaatc aagagggggc	2580
256	ctggagccac tcaatcaagt ggagcaggat gggagcaagc actgtgcaga ccaatgcaat	2640
257	ccccagttaa cacaaaaaat aaataaaaaga gatgagattc agtctcttga ctgtgactga	2700
258	ctgggagctt tatagtgtat gcttgtgtct tttctccatt ttatattaatt agggaaaagaa	2760
259	atgccttatca cacactctac gtgtgaggtt caacccctccac aggaaagggtt gtttaggaaca	2820
260	tttcaacttc tagaagtttca taaacataag gtaaatccat ctttgcctt gggatcactg	2880
261	cacatcttag aaaggcaaat aaatcagtaa ttgggtggca taattactag ctcatggact	2940
262	gacaaggctt acactatttca gaatctcaca gaagtaagcc atgggacaga tagagtctga	3000
263	tagtgggtcc ccgtttccctg gaggtcacac ttactcatcc ccctggaccc tgggcttctc	3060
264	atgattgtca gagagtttgc tggaccagg tcagccagt ttcccttccc ctgaaaaatc	3120
265	ctccaatggc tcgcaccaag actagagatg caagtgcac accatccacc ctctcagcag	3180
266	ccaggttttgc cgttccataa tgcacgtac ccccaagtcat accaatctcc ttggagctct	3240
267	ccagacaggc tgccatgtgt ggtcgccct ctgtgttgc gtccttggc ttggcaagcc	3300
268	tggaaatgccc tttctccatg attgtactct gggattctg tgcgttcttcc gagatgaagc	3360
269	tcctccaccc tggaaattctt gcctctctt ccaggtccag ctccctgtggc tgaataccct	3420
270	tggctgactt aacatttttgc ctggccaaatg tcttaatcat ctctaaatcc ctctgggtcc	3480
271	ccgacagtat ctggccagg caaagggttc agcaaataact tgcaaaatcc aataaacttt	3540
272	actatgttac tagctggca tgatgttca ggcacttggg agattataat ctggtgagca	3600
273	ttgtgttagt ctttttttttggataaaacac caatgataaa ctgacccctt actctcattt	3660
274	tagcacatct actcatcttcttcaatgtctt ggtgggttta taaaaccat cagtagaaca	3720
275	gagagtgtatc ataatcatat ggtgaaaata acatcagcta acatatttac tgaacatgtct	3780
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277	aataagatga ggaagtggag atgggcttac tcaagtcaca caatagcaag atggggatcaca	3900
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279	ctgcacatgg cgaggaggcag tcagggtgtc ctcccttctt catactgaaa taactctgca	4020
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281	agctcagattt atgactaacc cccatagata ttcaagctgtt ttgcaagaag tggatgaatg	4140
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283	cggaaggagg catatgcaca tttgcaaggt tatagttagtgc cactctaattt ccactggctt	4260
284	ctgagagctt gtaggtttctt tgacttaatc attctggat taaggtatg gatcctcaac	4320
285	accttttctt tccctggctt ttactaacca tgtaacagaa atgagcagag aaaacccaag	4380
286	aaagcgaact ggagacttgc tgagtgtgtc aaagatgttc aggtccaaat gtctctgt	4440
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288	gagactaaat tattatccatg atagcccaaaggatgtaagg cagacatgtg gaagaacctg	4560
289	gatttttggg caagttgtatg aatgccttgc gcccataatc aaagagaggat gataggagac	4620
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292	cataagtatg catctattaa taacaatgca agaaagctgtt acaactgaag tctggatattt	4800
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298	atcaatgtgc tccaaagata agcccaagaaa acacgttgt tgcctttgtca cactgacaat	5160
299	tagaatcgatggaaaatggaa gaaaacaggaa aatggcaat ggttcaatgt accaggagga	5220
300	aaccgtgcctt gaaagttgtctt gcttagtgcac tgggacactc gctttctgtt ctcttgcata	5280
301	ggacagccta ggccgtgtgg cttttataaa acaaagctat gaaagggtcg tcaaattttc	5340
302	tagggctgca actgtggcac tacgttgcatt tgccttgcagg gacactgaca agcagcactg	5400
303	agttctatgc aagcccaatgtt gtccttcttcatggatgacc cccagagaac taaggcccag	5460

VERIFICATION SUMMARY

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DATE: 10/29/2001

TIME: 14:15:11

Input Set : A:\20377YP SEQ LIST.TXT

Output Set: N:\CRF3\10292001\I890836.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date

L:42 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:1